

UNIVERSITY OF FLORIDA

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- ▶ Current experiment and projects (earlier experience on CDF, ...)
 - ▶ CMS Level-1 muon trigger, and its Phase-2 upgrade
 - ▶ Includes usage of machine learning for regression
 - ▶ CMS High Level Trigger
- ▶ Future idea: Asynchronous collider Level-1 trigger systems
 - ▶ Tag data with time stamp and process asynchronously, much like HLT and also intensity and cosmic frontier expts.
 - ▶ Simplify challenge of maintaining synchronization across large experiment with fast optical links and timing detectors
 - ▶ CMS experiment already running some parts asynchronously (links, some processors). Go fully asynchronous.
 - ▶ Did some R&D back in 2006 for muon trigger ([IEEE NSS 2006](#))